CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.8/KRIDL/STEEL/2014-15 07.06.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager,** KRIDL, Bangalore.
Name of the Work	:	Improvements to roads and drains at Amco Layout, Hebbal Sarawar and Balaji Layout in Ward No. 8, Kodigehalli Layout Sub Division, BBMP, Bangalore.
Reference	:	AEE/KH/665/2014-15 Dated: 04.06.2014
Date of Test	:	07.06.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	12	0.89	515	558	13.25	O.K	O.K

Note:

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⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 15 days from the date of testing.

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Job No.: CTCE/BBMP/WNo.8/KRIDL/CUBE/2014-15 07.07.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	: **Technical Manager,** KRIDL, Bangalore.
Name of the work	: Improvements to roads and drains at Amco Layout, Hebbal Sarawar and Balaji Layout in Ward No. 8, Kodigehalli Layout Sub Division, BBMP, Bangalore.
Reference	: AEE/KH/665/2014-15 Dated: 04.06.2014
Sample ID	: Drain Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	09.06.2014	07.07.2014	8.097	476.3	21.17
2	09.06.2014	07.07.2014	8.149	493.8	21.95
3	09.06.2014	07.07.2014	8.254	511.7	22.74

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NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.8/KRIDL/WMM/Gradation/2014-15

01.07.2014

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer**, Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Improvements to roads and drains at Amco Layout, Hebbal Sarawar and Balaji Layout in Ward No. 8, Kodigehalli Layout Sub Division, BBMP, Bangalore.

Reference : AEE/KH/665/2014-15 Dated: 04.06.2014

Date of Testing : 01.07.2014

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **26190**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	786	786	3.0	97.0	95-100
22.4	6582	7368	28.1	71.9	60-80
11.2	4945	12313	47.0	53.0	40-60
4.75	3852	16165	61.7	38.3	25-40
2.36	3561	19726	75.3	24.7	15-30
0.600	4228	23954	91.5	8.5	8-22
0.075	1896	25850	98.7	1.3	0-8

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Job No.: CTCE/BBMP/WNo.8/KRIDL/SDBC/Bitumen/2014-15 19.07.2014

BITUMEN CONTENT AND GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IS : 2386 and IRC : SP : 11 - 1984

CLIENT	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
AGENCY	**Technical Manager,** KRIDL, Bangalore.
NAME OF THE WORK	Improvements to roads and drains at Amco Layout, Hebbal Sarawar and Balaji Layout in Ward No. 8, Kodigehalli Layout Sub Division, BBMP, Bangalore.
REFERENCE	AEE/KH/665/2014-15 Dated: 04.06.2014
SAMPLE I/D	Roads at Amco Layout, Hebbal Sarawar and Balaji Layout in Ward No. 8
DATE OF TESTING	19.07.2014

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	474	474.5
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	26	25.50
7. Bitumen content in %	5.20	5.10
8. Average	**5.15**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	26.34	5.56	5.56	94.44	90-100
4.75	245.86	51.87	57.43	42.57	35-51
2.36	53.16	11.22	68.64	31.36	24-39
1.18	49.65	10.47	79.12	20.88	15-30
0.3	39.75	8.39	87.50	12.50	9-19
0.075	32.16	6.78	94.29	5.71	3-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	25.19	5.04	5.04	94.96	90-100
4.75	244.36	48.87	53.91	46.09	35-51
2.36	88.75	17.75	71.66	28.34	24-39
1.18	45.63	9.13	80.79	19.21	15-30
0.3	36.16	7.23	88.02	11.98	9-19
0.075	39.68	7.94	95.95	4.05	3-8

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